

SAFETY DATA SHEET



Revision Date: 04/01/2015
Revision Number: 001.0

1. PRODUCT AND COMPANY INFORMATION

Product Name:	2002 All Purpose Oil (Turbine)	Item number(s):	15-01
Product Type/Use:	Lubricant	Region(s):	U.S.A
Restriction of Use:	None Identified	Telephone:	949 646-9035
Company Address:	Armite Laboratories Inc. 1560 Superior Ave Ste. A-4 Costa Mesa, CA 92627	Product Emergency:	CHEM-TEL 800-225-3924

2. HAZARD IDENTIFICATION

Emergency Overview

Appearance and Odor: Off White. Liquid at room temperature. Slight hydrocarbon

Health Hazards: Not classified as dangerous for supply or conveyance.

Safety Hazards: Not classified as flammable, but will burn.

Environmental Hazards: Not classified as dangerous to the environment.

Signal Word	Hazard Class	Hazard Category	Pictogram(s)
Warning	Eye Irritant	2B	None required

Hazard Statements

Warning: Causes eye irritation

Precautionary Statements

Prevention: Wash hands thoroughly after handling. Wear protective eyewear. Wear protective gloves.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Store in a cool well ventilated place.

Disposal: Follow Federal, State & Local rules & regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200 and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of chemicals (GHS).

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component(s)	CAS Number	Percentage*
Highly refined mineral oils* & additives *The highly refined mineral oils contain <3% (w/w) DMSO-extract, according to IP346	Mixture	96-98% <3%

*Exact percentage may be a trade secret, concentration range is provided to assist user in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Wash with soap and water. If hot material contacts the skin, immediately cool before attempting removal. If symptoms develop and persist, seek medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Symptoms: See section 11.

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5. FIRE FIGHTING MEASURES

Flash Point: >215°C / 419°F (COC) **Auto ignition temperature:** >320°C / 608°F

Specific Hazards: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.

Extinguishing media: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires.

Unsuitable Extinguishing Methods: DO NOT use water in a jet.

Protective Equipment for Firefighters: Proper protective equipment including breathing apparatus must be worn when approaching a fire in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see chapter 8 of this SDS. See chapter 13 for information on disposal. Observe the relevant local and international regulations.

Protective measures: Avoid contact with skin & eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or waterways by using sand, earth, or other appropriate barriers.

Clean-up method: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by using sand or earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

Additional Advice: Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions: Use local exhaust ventilation if there is a risk of inhalation of vapors, mists, or aerosols. Use the information in the sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling: Avoid prolonged or repeated contact with skin. Avoid inhaling vapor and/or mists. When handling material in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Storage: Keep container tightly closed in a cool, well ventilated place. Use proper labeling and closeable containers. Store at ambient temperature.

Product Transfer: This product has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations.

Recommended Materials: For containers or container linings, use mild steel or high density polyethylene. Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

Unsuitable Materials: PVC

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	Notation
Oil mist, mineral	TWA (inhalable fraction) 5 mg/m ³	Z1 PEL (mist) 5 mg/m ³		
Highly refined Mineral oils	TWA (inhalable fraction) 5 mg/m ³	Z1 PEL (mist) 5 mg/m ³		
Highly refined Mineral oils		Z1 (mist)		Listed

Biological Exposure Index (BEL): No biological limit allocated.

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Exposure Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist is formed, there is a greater potential for airborne concentrations to be generated. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures. Always observe good personal hygiene measures, such as washing hands after handling this material and before eating, drinking or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE supplier.

Respiratory Protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good hygiene practices, precautions should be taken to avoid breathing material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory suppliers. Where air-filtering respirators are suitable, select an appropriate combination mask and filter. Select a filter suitable for combined particulate/organic gases and vapors [boiling point >65°C(149°F)].

Hand Protection: Where hand contact with the product may occur, the use of gloves approved to relevant standards (i.e. Europe: EN374. US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g frequency and duration of contact, chemical resistance of glove material, dexterity. Gloves must only be worn on clean hands. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for >480 minutes where suitable gloves can be identified. Glove thickness typically >0.35 mm depending on the glove make & model.

Eye Protection: Wear safety goggles or full face shield if splashes are likely to occur.

Protective Clothing: Shin protection is not ordinarily required beyond standard issue of work clothes.

Monitoring Method: Monitoring of the concentrations of substances in the breathing zone of workers or in the general workplace may be required to conform compliance with an OEL and adequacy of exposure controls. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory.

Environmental Exposure Controls: Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge for exhaust air containing vapor.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid at room temperature.

Color : Off White

Odor: Slight Hydrocarbon

Odor threshold: Not available

pH: Not applicable

Evaporation rate: Data not available

Pour point Typical: -12°C / 10°F

Flash point: >215°C / 419°F (COC)

Autoignition temp: >320°C / 608°F

Initial Boiling Point & Range: >280°C / 536°F Estimated values

Density: ca. 849 kg/m³ at 15°C / 59°F

Vapor Pressure: <0.5 Pa @ 20°C/68°F (estimated value(s))

Vapor density (air=1) : > 1 (estimated value(s))

Relative Density: Typical 850kg/m³ @ 15°C / 59°F

Water Solubility : Negligible

VOC content: Not determined

Specific gravity: ca. 0.849 at 15°C / 59°F

Kinematic Viscosity: Typical 32mm²/s @ 40°C / 104°F

Partition coefficient: n-octanol/water: >6 (based on similar products)

Flammable/Explosive Upper/lower limits: Typical 1-10%(V)

(based on mineral oil)

10. STABILITY AND REACTIVITY

Stability: Stable

Reactivity: Not available.

Incompatible materials: Oxidizing agents.

Hazardous decomposition products: Hazardous decomposition is not expected to form in normal storage.

Conditions to avoid: Extremes of temperature and direct sunlight

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11. TOXICOLOGICAL INFORMATION

Basis for Assessment: Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the produce as a whole, rather than for individual component(s).

Acute Oral Toxicity: Expected to be low toxicity: LD50 >5000 mg/kg, Rabbit

Acute Dermal Toxicity: Expected to be low toxicity: LD50 >5000 mg/kg, Rat

Acute Inhalation Toxicity: Not considered to be an inhalation hazard under normal conditions of use.

Skin Irritation: Expected to be slightly irritating.

Eye Irritation: Expected to be slightly irritating.

Respiratory Irritation: Inhalation of vapors or mist may cause irritation.

Sensitization: Not expected to be a skin sensitizer.

Repeated Dose Toxicity: Not expected to be a hazard.

Mutagenicity: Not considered a mutagenic hazard.

Carcinogenicity: Not expected to be a carcinogenic. Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of components and ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the produce as a whole, rather than for individual component(s).

Acute Toxicity: Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non-toxic: LL/EL/IL50>100mg/l (to aquatic organisms) LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract. Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1mg/l.

Mobility: Liquid under most environmental conditions. If enters soil, it will absorb to soil particles and will not be mobile. Floats on water.

Persistence/degradability: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

Bioaccumulation: Contains components with the potential to bioaccumulate.

Other Adverse Effects: Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Recover & recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose of into the environment, in drains or waterways.

Material disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not disposal of into the environment, in drains or waterways.

Container disposal: Dispose in accordance with prevailing regulations,, preferably to a recognized collector or contractor.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORTATION INFORMATION

US Dept of Transportation (49 CFR)

This material is not subject to DOT regulation under 49 CFR parts 171-180

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IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is either not classified as dangerous under IATA regulations or need to follow country specific regulations.

15. REGULATORY INFORMATION

This regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS All components listed or polymer exempt.
TSCA All components listed.
DSL All components listed.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

Cumene (98-82-8) Reportable Quantity: 5000 lbs

Shell classifies this material as an "oil" under CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA. The components with RO's are given for information.

Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Center at (800) 424-8802.

SARA Hazard Categories (311/312): No SARA 311/312 Hazards.

SARA Toxic Release Inventory (TRI) (313):

Diphenylamine (122-39-4)	0.00%
1,2,4-Trimethylbenzene (95-63-6)	0.00%
Cumene (98-82-8)	0.00%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Prop 65)

This product contains a chemical known to the State of California to cause cancer.

New Jersey Right-To-Know Chemical List

Highly-refined mineral oils (64742-65-0)	100%	Listed
Diphenylamine (122-39-4)	0.001%	Listed
1,2,4-Trimethylbenzene (95-63-6)	0.001%	Listed
Cumene (98-82-8)	0.001%	Listed

Pennsylvania Right-To-Know Chemical List

Highly-refined mineral oils (64742-65-0)	100%	Listed
Nonylphenol (25154-52-3)	0.0016%	Listed
Diphenylamine (122-39-4)	0.001% Environmental Hzd	Listed
1,2,4-Trimethylbenzene (95-63-6)	0.001% Environmental Hzd	Listed
Cumene (98-82-8)	0.001% Environmental Hzd	Listed

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

This SDS has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard CFR 1910.1200.

Prepared by: Armite Laboratories Inc.

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